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| 10/670,448  | 09/25/2003  | Carl F. Dadson       | 038190/269365       | 5530             |
| 67141 7590 04/01/2008   |             |                      |                     |                  |
| ALSTON & BIRD, LLP<br>BANK OF AMERICA PLAZA<br>101 SOUTH TRYON STREET, SUITE 4000<br>CHARLOTTE, NC 28280-4000 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| FORDE, DELMA ROSA   |             |                      |                     |                  |
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| 2828  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/670,448

**Applicant(s)**

DADSON ET AL.

**Examiner**

Delma R. Fordé

**Art Unit**

2828

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2, 4 - 9 and 11 - 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 4-9, 11-13, 15 and 18 - 21 is/are rejected.
- 7) ☒ Claim(s) 14, 16, 17 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 11, 12, 15, 18, 19, 20 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartosiak et al et al. (5,085,525) in view of Hanson (5,512,748).

***Regarding claim 11***, Bartosiak discloses a method for generating an infrared image, comprising: providing laser light (see Figure. 2, Character 26, abstract); scanning (see Figure. 2, Character 22, abstract) laser light across a first side of a target plate (see Figure. 2, Character 12); displaying at least one infrared image on a second side of the target plate (Fig. 2, Abstract, Column 3, Lines 16 – 21), in response to the laser light scanned thereacross (Column 3, Lines 15 – 46) ; and determining whether a sensor (see Figure. 2, combination of Characters 36, 40 and 44) which faces the second side of the target plate (see Figure. 2, Character 12) detects the at least one infrared image (Abstract, Column 2, Lines 20 - 50, Column 3, Lines 15 – 20

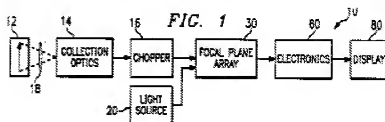
and Column 4, Lines 3 – 9).

Bartosiak discloses the claimed invention except for at least one infrared thermal image having hooter and cooler portion at different respective temperatures. Hanson teaches providing his device with a thermal imaging system with at least one infrared thermal image having hooter and cooler portion at different respective temperatures. However, it is well know in the art to apply at least one infrared thermal image having hooter and cooler portion at different respective temperatures as discloses by Hanson in Figure 2, Character 66, Column 6, Lines 6 – 16 and 27 – 31. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was to apply the well known at least one infrared thermal image having hooter and cooler portion at different respective temperatures as suggested by Hanson to the imaging system of Bartosiak, because the processor used a control circuit to operate thermoelectric cooler/heater to adjust the temperature of target plate to produce optimum sensitivity, and the thermal image having different portions of temperatures (see Figure 2, Character 66, abstract and Column 6, Lines 6 – 16 and 27 – 31 of Hanson).

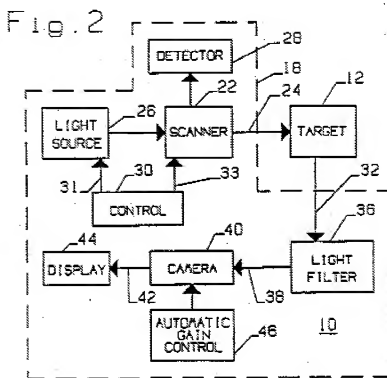
Bartosiak discloses the claimed invention except opposite the first side. However, it is well known in the art to apply opposite the first side. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was to apply the well known opposite the first side to the laser, because it would have been an obvious matter of design choice bounded by well known manufacturing constraints and

ascertainable by routine experimentation and optimization to choose these particular dimensions because applicant has not disclosed that the dimensions are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using another dimension. Indeed, it has been held that mere dimensional limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See also MPEP 2144.04(IV)(B).

**Hanson shown Figs. 1 and 2**



**Bartosiak shown Fig. 2**



**Regarding claim 2**, Bartosiak discloses, a source element is diode pumped solid-state laser light source (abstract).

**Regarding claim 4**, Bartosiak do not explicitly discloses at least one scanning element comprises an amplifier. However, it was shown above that Bartosiak teach a sensor. This sensor will inherently have the characteristics to amplifier the signal as claimed, and therefore these limitations are taught by Bartosiak.

**Regarding claim 12**, Bartosiak do not explicitly disclose the infrared image having at least one portion that is a temperature of at least 1000K. However, it was shown above that Bartosiak teach an electrically conductivity material including in the target plate. These materials will implicitly have the thermal high conductivities (Temperature of at least 1000K) as claimed, and therefore these limitations are taught by Bartosiak.

**Regarding claim 15**, Bartosiak discloses a laser is controlled (see Figure. 2, Character 30) such that it transmits laser light at one or more power levels (Column 3, Lines 66 – 67 and Column 4, Lines 1 – 20).

Claims 5, 7, 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartosiak et al et al. (5,085,525) in view of Hanson (5,512,748) further in view of Modisette et al. (4,778,985).

**Regarding claim 5**, Bartosiak discloses the claimed invention except a target plate with a transparent heat sink layer facing a scanner, an insulator layer adjacent the transparent heat sink layer, and an emissive layer that is at least opaque and adjacent to the insulator layer. Modisette teach a target plate with a transparent heat sink layer facing a scanner, an insulator layer adjacent the transparent heat sink layer, and an emissive layer that is at least opaque and adjacent to the insulator layer. However, it is

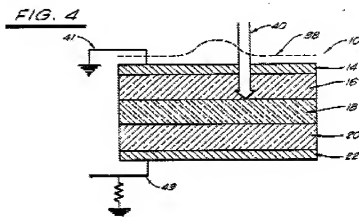
well known in the art to apply a target plate with a transparent heat sink layer facing a scanner, an insulator layer adjacent the transparent heat sink layer, and an emissive layer that is at least opaque and adjacent to the insulator layer as discloses by Modisette in Figure 4, Column 4, Lines 38 – 45. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was to apply the well known a target plate with a transparent heat sink layer facing a scanner, an insulator layer adjacent the transparent heat sink layer, and an emissive layer that is at least opaque and adjacent to the insulator layer as suggested by Modisette to the laser of Bartosiak, because this configuration allows the imaging to take place on either side of a plate structure. Alternatively, this configuration allows exposure on one side of the plate structure and readout from the other side of the plate structure. This configuration further enhances the capability of the present plate structure by making the configuration an ideal photoreceptor and the imaging plate structure is sensitized reponing to a radiation image to be provided by a radiation source. The imaging plate structure is sensitized by providing a uniform high electrical field between the conductive layers at the outer surfaces of the insulative layers (see Column 3, Lines 37 – 45, Column 4, Lines 38 – 45 and Column 10, Lines 21 – 29 of Modisette).

***Regarding claim 7***, Modisette discloses in Figure 4, an insulator layer of heat-resistant glass (Column. 6, Lines 41-43).



**Regarding claim 8**, Modisette discloses in Figure 4, an emissive layer comprising carbon (Column 8, Line 16).

Modisette shown Figs. 4 and 6



Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartosiak et al. (5,085,525) in view of Hanson (5,512,748) further in view of Paoli et al (3,680,001).

**Regarding claim 6**, Bartosiak discloses the claimed invention except for heat sink is made of diamond. However, it is well known in the art to apply the heat sink is made of diamond as discloses by Paoli in Column 2, Lines 44 – 45. Therefore, it would have been obvious to a person having ordinary skill in the art to apply the well know heat sink is made of diamond as suggested by Paoli to the infrared image of

Bartosiak, because one of the property is a high thermally conductivity material (see Column 2, Lines 44 - 45 of Paoli).

Claims 9 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartosiak et al et al. (5,085,525) in view of Hanson (5,512,748) further in view of Frosch et al (3,680,001).

***Regarding claims 9 and 13,*** Bartosiak in view of Hanson discloses the claimed invention except a collimator. Frosch teach a collimator. However, it is well known in the art to apply a collimator as discloses by Frosch in Column 21, Lines 23 – 26. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was to apply the well known a collimator as suggested by Frosch to the laser of Bartosiak, because would be used to make the target appear to be at infinity and created a to cause the spatial cross section of the beam to become smaller (see Column 21, Lines 23 – 26. of Frosch).

***Regarding claim 18,*** Bartosiak discloses a system for testing an infrared sensor, comprising: a source element (see Figure. 2, Character 26) configured to provide laser light (abstract); at least one scanning element (see Figure. 2, Character 22) configured to receive the laser light from said source element and further configured to redirect the laser light; a processing element (see Figure. 2, Character 30) configured to control

operation of said at least one scanning element (see Figure. 2, Character 22) to generate at least one infrared image (Column 3, Lines 65 - 67 and Column 4, Lines 1 - 9); a target element (see Figure. 2, Character 12) configured to receive the redirected laser light from said at least one scanning element (see Figure. 2, Character 22) on a first side of said target element and further configured to display at least one infrared image on a second side of said target element that is opposite the first side (Abstract, Column 2, Lines 20 - 50, Column 3, Lines 15 - 20 and Column 4, Lines 3 - 9); and an infrared sensor element (see Figure. 2, combination of Characters 36, 40 and 44) facing the second side of said target element (see Figure. 2, Character 12), wherein said processing element (see Figure. 2, Character 30) is also configured to determine whether said sensor element detects the at least one infrared image (Abstract, Column 2, Lines 20 - 50, Column 3, Lines 15 - 20 and Column 4, Lines 1 - 9).

Bartosiak discloses the claimed invention except opposite the first side. However, it is well known in the art to apply opposite the first side. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was to apply the well known opposite the first side to the laser, because it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose these particular dimensions because applicant has not disclosed that the dimensions are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using another dimension.

Indeed, it has been held that mere dimensional limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See also MPEP 2144.04(IV)(B).

***Regarding claim 19***, Bartosiak discloses a processing element (see Figure. 2, Character 30) is configured to control output power of said source element (Column 3, Lines 65 - 67 and Column 4, Lines 1 - 9).

***Regarding claim 20*** Bartosiak discloses a optical element configured to focus the at least one infrared image at a focal point of said infrared sensor element Column 3, Lines 38 – 42 and Column 4, Lines 1 - 9).

***Regarding claim 21***, Bartosiak do not explicitly disclose the infrared image having at least one portion that is a temperature of at least 1000K. However, it was shown above that Bartosiak teach an electrically conductivity material including in the target plate. These materials will implicitly have the thermal high conductivities (Temperature of at least 1000K) as claimed, and therefore these limitations are taught

by Bartosiak.

***Allowable Subject Matter***

Claims 14, 16, 17 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 2, 4 - 9 and 11 - 22 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Fordé whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Delma R. Fordé/  
Examiner, Art Unit 2828

/Minsun Harvey/  
Supervisory Patent Examiner, Art Unit 2828